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Technology Needs of the Canadian Voluntary Sector

IM/IT Joint Table of the Voluntary Sector Initiative

Supporting Document 1

Detailed methodology
Literature scan and examples of websites

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Technology Needs of the Canadian Voluntary Sector – Summary of Findings

1. DETAILED METHODOLOGY

The project approach and methods were originally outlined in the Draft Methodology submitted by RealWorld Systems (RWS)[1] to the VSI's IM/IT Joint Table and subsequently modified following discussion with the IM/IT Joint Table during the month of September, 2001.

Survey methodologies used in this project have been consistent with techniques that assess technology needs among end users. They have not been restricted to survey techniques that presume respondent familiarity with the subject matter. In fact, many respondents did not have sufficient information about costs or benefits of technology to be able to rank options presented to them in any meaningful way. The project methodology included qualitative and quantitative techniques from the fields of market research, requirements assessments and public policy analysis to understand the technology needs of the voluntary sector.

1.1 Assumptions

The methodology was developed on the basis of the following assumptions:

1. That the objective of the study is to define a funding or technology development initiative that will benefit the entire voluntary sector in Canada. The options should not be too 'packaged', but should demonstrate a range of alternatives and approaches that could be considered by the Table. The initiative is projected to cost $10 million over the next five years.

2. That the voluntary sector may be defined as a subset of a broader definition of non-profit institutions that are: organized; non-governmental; non-profit distributing; self-governing; and voluntary. This excludes organizations that are: quasi-governmental (such as hospitals or public schools); casual, temporary or *ad hoc*; cooperatives or social economie groups; closed-shop unions, professional or industry associations; Crown corporations or agencies that are controlled by government or business. For the purpose of this review, we have adopted the definition of the "voluntary sector" used by the VSI:

   The voluntary sector comprises self-governing organizations that exist to serve a public benefit, generate social capital but do not distribute private profit to members, depend to a meaningful degree on volunteers, involve participation on a voluntary basis, and are independent or institutionally distinct from the formal structures of government and the profit sector.[2]

[1] Note: Good Enough Information Systems has changed its name to RealWorld Systems.
[2] Voluntary Sector Initiative, http://www.vsi-isbc.ca/eng/faqs.cfm

This includes a diverse multitude of organizations range from small community-based groups to large, national umbrella organizations. Some of these may be part of a relatively small subset of registered charities (estimated at approximately 77,000 organizations in Canada according to the Canada Customs and Revenue Agency[3]. Others will be part of the larger group of incorporated nonprofits (estimated at over 175,000 organizations in Canada[4]). And still others will be informal or unincorporated groups – one estimate places their numbers at 870,000[5] (for a discussion, see for example, McKnight, available online at http://www.northwestern.edu/IPR/publications/grandblvd.html.

Throughout this document, the terms "voluntary" and "nonprofit" are used interchangeably to represent not for profit incorporated organizations in Canada corresponding to the definition of the voluntary sector cited above.

VSI has recently issued a Request for Proposals for a major study of the voluntary sector in Canada to be conducted over the next two years. The study, described will include [6]. The results of that survey should provide additional and much-needed[7] information that will help to design future interventions for the sector. For a more lengthy discussion, see Appendix A (Definition of the Voluntary Sector).

3. That the project must include discussions with and surveys of organizations that are small, new, regionally dispersed and/or rural in preference to the 'usual suspects' of national umbrella groups.

1.2 Project phases

This project has been conducted in three major phases of the study: option generation, option ranking, and analysis:

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[3] Privy Council Office, Voluntary Sector Task Force, http://www.pco-bcp.gc.ca/default.asp?Language=E&Page=pcossecretariats&Sub=VSTF&doc=backgrounder3_e.htm

[4] Paul Reed and Valerie Howe (2000), "Voluntary Organizations in Ontario in the 1990s", Kahanoff Foundation.

[5] Michael Hall and Keith Banting, "The Nonprofit Sector in Canada: An Introduction", Working papers, School of Policy Studies, Queen's University, http://policy.queensu.ca/sps/ThirdSector/Papers/index.html

[6] The Request for Proposals, described in http://www.vsi-isbc.ca/eng/joint_tables/capacity/rfp.cfm, has the complete objectives: A comprehensive list of voluntary organizations; a general description of what these organizations are doing; a typology of the organizations; and perceptions of their strengths and weaknesses.

[7] Erwin Dreesen (2001) "What we should know about the voluntary sector but don't", ISUMA, vol. 2(2), p.11-19.

1.2.1 Option generation

Based on open-ended interviews with over 50 key informants from the voluntary sector (see Appendix B of the project final report), a literature review and an open online discussion, we developed a list of key needs, issues and options. The interviews, for example, resulted in about 700 separate comments that were analyzed and synthesized to come up with 25 technology options. These options were assessed against the organizational needs and technology studies from the literature to ensure that all major perceived needs would be addressed by at least one option in the final list.

The Joint Table was anxious to hear the perspectives of voluntary sector organizations that have typically been left out in other consultations. Accordingly, we spoke to many organizations that were small, new, regionally dispersed and/or rural in preference to the 'usual suspects' of national umbrella groups located in Toronto or Ottawa. In addition, several opinion leaders from national groups were interviewed because of their connections and knowledge of the sector; many of these are members of VSI joint tables. RWS interviewed Canadian voluntary sector agencies with expertise on the overall nature and needs of the sector, and/or lead users who are using technology in effective or highly promising ways to meet organizational and community needs.

Our aim was to develop a list of technology options that would provide a comprehensive list of what the voluntary sector perceives as valuable. RWS wanted to capture the sector's perspectives using, as much as possible, their own words. Therefore, the final list contains options that, in some cases, overlap or are subsets of others. The 25 options were tested in focus groups and further narrowed to 17. The final list is in Appendix A of the project final report.

1.2.2 Option ranking

The list of options was incorporated into a structured survey and tested in a pilot mailing to 200 organizations selected randomly from the Canada Customs and Revenue Agency (CCRA) database of registered charities. The survey was also posted on the Web, and promoted in listservs, email mailing lists, and articles posted in Charity Village, Canada's largest portal for nonprofits. It was handed out at several VSI consultations as well. On the basis of the pilot results changes were made to the survey instructions and demographic questions. However, none of the 17 options were changed. Responses from the pilot group confirmed that the list was comprehensive and accurate.

The survey was then sent to 2,249 randomly selected voluntary sector organizations drawn from the Volnet database[8]. This database comprises the CCRA dataset of registered charities as well as the incorporated nonprofits from every province except Nova Scotia. See section 1.4 for details on the sampling methodology used.

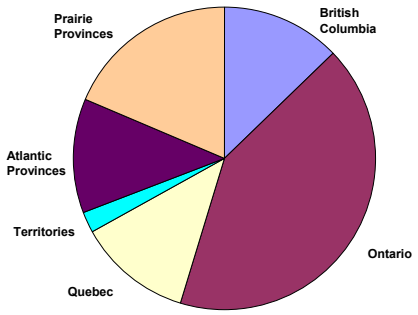
[8] The database was developed by Volnet for its own research and offered to the IM/IT Joint Table for this study.

1.2.3 Analysis

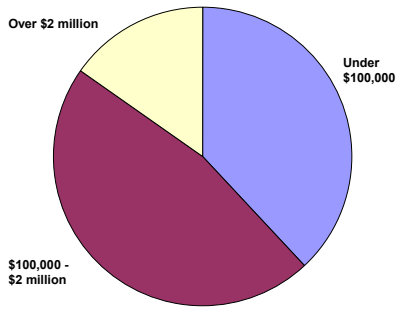
The survey contained 17 technology options, one open-ended question for additional comments, plus several demographic questions. Each option could be rated as 'High Priority', 'Medium Priority', 'Low Priority', or 'Don't Know'. As noted above, every option was good; all of them could be supported from interviews and research, and even the lowest-rated was scored as Medium or High Priority by half of the respondents. In order to rank the options, we subtracted the 'Low Priority' scores from the 'High Priority' scores for each question, and ignored the 'Medium Priority' and 'Don't Know' responses. As a result, some options have a negative score (if there were more 'Low' than 'High' priority ratings) even if most respondents rated them as Medium or High priority.

RWS received a total of 184 responses from the mailing of 2,294 randomly selected organizations, making a response rate of 8%. This is a fairly low response, but not unexpected given that the final survey was six pages long and quite complex. In total, including the Web surveys and responses from consultations, we received 495 completed surveys. It was impossible to estimate the response rate for the Web survey, since public invitations were sent out broadly through many online communication vehicles.

All Respondents by Region



All Respondents by Annual Income



The responses we received represented a cross-section of voluntary organizations both in total and from the random sample. RWS heard from organizations of all sizes across the country, most of which had small or medium sized annual incomes.

The low response rate means that the survey respondents were, to a large degree, self-selected – even the ones that were sent random mailings. Respondents had the interest and the incentive to fill out a long and complicated survey. Therefore, there is a possibility that the results of the survey do not represent the real preferences of the sector. Fortunately, there was a high degree of consistency among the responses. The results from the random mail/fax surveys were not markedly different from the results of the web-based surveys, and the subgroups were almost

identical to each other in terms of their top five, middle four and bottom eight choices. That suggests that organizations from a wide range of the Canadian voluntary sector who are inclined to state a public opinion about technology are likely to agree with the results of this survey. For the total group of respondents, the top five options that are described in the Executive Summary were among the top seven choices for all 26 subgroups except for the Territories (where the third choice was rated as eighth), and for Faith Groups and International Aid, which had significantly different profiles from the rest of the group. The random sample responses, with a total number of respondents of 184, had smaller numbers in each subgroup and therefore showed a bit more deviation although not much. The same top five options were all in the top 8 ranks of the 26 subgroups except for the three groups noted above Faith, International Aid and Territories) and Quebec, which, like the Territories, rated the third choice lower (9th rank).

1.3 Data collection methods

1.3.1 Interviews

Originally, telephone interviews were planned with 50 informants drawn from:

- Opinion leaders in Canadian voluntary sector agencies;
- Lead users in technology in voluntary sector agencies and small to medium private enterprises in Canada and abroad;
- Technology leaders and futurists in Canada.

In responses to comments received by the IM/IT Joint Table, the list of respondents was revised. Instead, telephone interviews were conducted with over 50 informants drawn from members of VSI Joint Tables, and others. Partly because many VSI Joint Table members are either from government or from national umbrella groups and associations, most of them are located in either Toronto or Ottawa. This leads to an overrepresentation of those two cities.

To compensate for this over-representation, many of the original Toronto- and Ottawa-based interviewees (in Appendix C of the project Draft Methodology) were removed from the final interview lists, unless they also are members of VSI Joint Tables. These respondents were replaced with people who were based in other regions throughout Canada, including rural areas. We believe that the final respondent list better reflects the directions of the IM/IT Joint Table members.

The new directions also resulted in a change to the interview protocol. Instead of interviewing as many industry leaders in technology, we relied more heavily on literature review to get input on future technology trends. On the basis of testing interview protocols in our initial interviews with IM/IT members, we also decided to use only one protocol, which we revised slightly and have attached at Appendix B. We are relying on literature reviews of previous studies of the voluntary sector to identify key organizational issues that do not apply to technology rather than focusing on this question in our interviews.

1.3.2 Literature Scan

The review was an investigation into recent and current policy, practice and innovations in IM/IT in the voluntary sector in Canada and select nations. The results of the literature review were also combined with information from key informants to generate hypotheses for testing with a broad representative sample of voluntary sector representatives.

Information for the review was gathered through Web-based searches, including open-text search engines such as Google.com and NorthernLight.com, foundation sites, major government and voluntary sector sites in Canada, the United States, the United Kingdom, Australia, New Zealand, Japan and Singapore. Information was also gathered from databases including Expanded Academic ASAP, Canadian Business and Current Affairs and Public Affairs International. The countries outside Canada were chosen for their relative comparability to the Canadian policy context and because they each have some form of national investment in technology that benefits their respective voluntary sectors. Preference was given to sources no more than 5 years old. To avoid duplicating existing work and knowledge, preference was given to existing reviews of organizational needs and IM/IT gaps in technology in the voluntary sector.

Across the studies reviewed for this literature review, it was clear that there is little depth of information about these organizations or their need for or use of technology. Most reviews of the sector's needs are limited by their focus on subgroups within the sector (such as within a particular geographic region) or they are based on anecdotes and case studies. Many earlier studies on the penetration of technology into the sector are drawn from US sources. Most recent studies of information technology (IT) in the voluntary sector tend to focus on the Internet, ignoring other important forms of information and communication technology such as teleconferencing, cellular telephones, Personal Digital Assistants or particular applications of Internet technology such as on-line chat, training or secure data transfer (such as FTP).

Finally, there are few sources for best practice information that is relevant specifically to the nonprofit sector and no comprehensive sources for Canadian information. For example, the National Survey of Giving, Volunteering and Participation[9] collected information about several forms of fundraising and their rates of success, but did not collect information about the success or failure of on-line giving strategies. Other sources for information are beginning to emerge (see for example the list of resources available at http://fdncenter.org/research/npr_links/npr06.html#tech1) however few contain information on Canadian nonprofits.

Four questions guided our literature review:

[9] Statistics Canada (2000), "Caring Canadians, Involved Canadians: Highlights from the 2000 National Survey of Giving, Volunteering and Participation", http://www.statcan.ca/english/IPS/Data/71-542-XIE.htm.

What are the core organizational needs of the Canadian voluntary sector?
Technology should be a tool to help organizations meet important needs, such as fulfilling their missions, attracting funding, using resources efficiently, and working more effectively with staff and volunteers. We reviewed recent studies of organizational needs in the voluntary sector to ensure that the Needs Analysis will focus on what is important to the sector rather than what is possible technologically.

What are the IM/IT gaps in the voluntary sector?
We reviewed recent studies and market research regarding penetration of key technologies into the voluntary sector and in relevant demographic segments, including low income and rural communities.

What are the documented best practices in IM/IT in the voluntary sector?
Best practices emerge from operational excellence, well-founded system management frameworks, and innovative experiments. The applicability of these may be limited or widely adapted

What public investment model for voluntary sector capacity building in IM/IT will best contribute to enhanced quality of life in Canada?
We looked at these and similar ones from select countries with focus on the organizational development assumptions underlying these initiatives.

These questions lead to investigations of gaps in the current situation, best practices with emerging influence and appeal, and public funding models from an international perspective. In this approach we move beyond concerns of basic access to effective implementation and collaborative exchange. Central to these themes is the relationship between current capacity and government policy and funding initiatives.

1.3.3 Online Discussion Group

RWS established a time-limited online discussion web site for open input from public participants interested in the Voluntary Sector Initiative. The discussion site provided access to an online version of the survey instrument, reports, and commentary. It was based on WebCrossing, a stable and reliable web discussion group that can be transferred over to VSI after the study to use for future interaction with voluntary sector organizations. Comments from the discussion group are included in the final list of open-ended responses included in the supplementary documentation. Features and operation of this online discussion included

- A secure, shared working environment
- Online support and training to encourage participation
- Integration with VSI project activities and communications
- Monitoring and reporting for reliability

1.3.4 Structured Survey of Voluntary Sector Organizations

A brief structured survey was sent out to 2,249 randomly selected voluntary sector organizations, including the pilot group. It was be written and administered after all of the other data had been collected and analysed, with the exception of the online discussion group which remained active until the conclusion of the study.

The interviews and other sources provided a range of possible issues and options for IM/IT investment in the sector. An options analysis examined each possible investment strategy in terms of potential impact, feasibility, cost, and consistency with VSI's role.

The structured survey listed a range of possible options, any one of which would be a useful and credible choice based on the information gathered to that point. The survey tested the extent to which the sector agrees with the options and recommendations developed in the previous phase, and identifies risks related to public perceptions and preferences. This approach is consistent with a risk management and consultative approach recommended by the Treasury Board in developing new initiatives.

1.4 Sampling methodology

The data obtained from the survey are a representative cross-section of the Canadian voluntary sector. One estimate suggests there are up to 870,000 groups that could be defined as belonging to the voluntary sector, including both registered and non-registered charities, and non-incorporated grassroots organizations in Canada[10]. For the purposes of this study creating a sampling frame based on this broad definition is not feasible. Instead, the sample is based on a working definition of the voluntary sector as described in section 1.1.

To obtain a meaningful profile of responses, at least ten respondents in any stratum, and preferably more, were needed. Projecting a uniform response rate of 20%, with approximately 20-23 strata, the survey began with a total sample of 2,000 plus another 10% to act as a pilot group, for a total of 2,200.

A mentioned above, we began with the Volnet database which comprises the CCRA dataset of registered charities as well as the incorporated nonprofits from every province except Nova Scotia. This dataset was supplemented with additional categories of non-profit organizations by considering which type of organizations may be systematically eliminated from the registered

[10] Michael Hall and Keith Banting. "The Non-Profit Sector in Canada: An Introduction." http://policy .queensu.ca/sps/ThirdSector/Papers/index.html.

group. This approach is described as "gradual sampling"[11] Decisions about who to include in the empirical material were refined in the course of collecting data, including key informant interviews and the literature review.

For registered charities sampled, we used the following strata:

- Geographic region (6 regions - Maritimes, Quebec, Ontario, Prairie Provinces, B.C., the Territories) – Located by postal code
- Major urban centre/town/rural - Located by postal code [12]
- Language (French, English, Other)
- Age of organization – Effective date of registration 1980 or earlier, 1996 or later, and between 1996 and 1980. (This may be refined on the basis of initial literature review)
- Size of organization - small, medium, large as measured by total revenues (to be refined on the basis of initial literature review)

In addition we ensured the inclusion of organizations serving Aboriginal communities

The following adjustments were made to achieve the final sampling frame.

- As recommended by the Chairs of the IM/IT Joint Table, we removed hospitals, organizations and schools (the 'MUSH sector') from our total sample. Hospitals, universities, schools and churches/places of worship were removed prior to randomization. (Places of worship represent a third of registered charities in Canada).
- Organizations that had been sent the pilot surveys were not removed prior to randomization.
- RWS randomly selected 2,000 organizations from the remaining dataset
- Organizations that were under-represented were then added to the sample
- RWS randomly selected 100 places of worship to ensure that faith communities were included.
- 100 organizations from each of the following regions and groups were added to the sample: the Territories, Prairies, Quebec, Atlantic provinces, Ontario and B.C.; French language agencies; organizations serving Aboriginal Canadians; organizations that were registered before 1980 and those registered after 1995; those with total annual revenues of under $100,000 and over $2 million.
- Size, age and language of organizations were identified through the CCRA database.

[11] See UweFlick, *An Introduction to Qualitative Research.* "Part 2 - Research Design: Sampling Strategies". London: Sage Publications, 1998.

[12] The first character of the Canadian postal code indicates the province or major populated area to which the FSA is assigned. The second character indicates whether the postal code is located in an urban or rural area. All postal codes with "0" (zero) in the second position belong to a rural area. For more detail, see www.datamap.org/atlasguide.htm

- Agencies serving Aboriginal Canadians were identified by means of a text search on agency names. The search was based on the following words: Native, Aboriginal, Indian, Inuit, First Nation, Cree, Mohawk, Iroquois, Ojibwa, Six Nations, Metis, Métis. We also checked visually to ensure that the selections were appropriate, e.g., not relating to 'East Indian' or 'West Indian' organizations.
- For strata that had less than 100 agencies, we did a random pull of the specific stratum in order to pull the total up to 100. For example, if we got 60 agencies in the territories, we pulled an additional 40 agencies out of the entire remaining list of territories agencies.

In the demographic section of the survey we asked whether the community served by the organization was at least 25% rural, aboriginal, francophone, or people with disabilities. And we asked what type of organization they were, based on the categories used by the Volunteer Opportunities Exchange: Art & Culture, Education, Environment, Faith Group, Health, International Aid, Social Services and Sport & Recreation. These two questions were the most problematic to agencies; three agencies stated that their community groups, if not appearing on the list, seemed to be less valued by the survey, and several objected to the inaccuracy of the category system. In total, we ended up with 26 separate groups for analysis (six regions, five types of communities served including 'none of the above', three sizes, three ages, eight types, and the total group).

2. FINDINGS FROM THE LITERATURE SCAN

2.1 What are the core organizational needs of the Canadian voluntary sector?

There have already been several reviews of the voluntary sector in Canada[13]. This section highlights the major issues raised in earlier reviews and attempts to provide some system for grouping them under broad headings. This section provides the starting point for the remainder of the review. Any effective policy response should be driven by the core organizational needs of the voluntary sector, and not on what is technologically possible or innovative. For this reasons, the other sections of this literature review have been organized according to the core organizational needs uncovered

Reed and Howe[14] studied the needs of a sample of forty nonprofit organizations in eight diverse communities in Ontario. These organizations ranged from very small organizations with no paid

[13] They include Paul Reed and Valerie Howe (2000), "Voluntary Organizations in Ontario in the 1900s" Statistics Canada (2000), "National Survey of Giving, Volunteering and Participation" PRA Inc. (2001), "Information Management / Information Technology and the Voluntary Sector – Environmental Scan" Carold Institute (1999), "Voluntary Action and Organization in Canada: The last decade and beyond".

[14] Reed and Howe (2000).

staff to large groups with hundreds of staff and volunteers and multi-million dollar budgets. The authors conducted in-depth interviews with the Executive Directors of each of the sampled organizations and asked organizations to complete a written questionnaire. The results of their survey suggest that nearly all organizations report core needs that can be loosely grouped into resource needs, workload needs and needs to cope with change.

- **Resource needs:**
  Nearly all organizations in their review noted a significant increase in general operational costs and a reduction in grant income or funding insecurity. They also noted difficulties in recruiting, retaining and effectively managing volunteers and staff. These organizations also felt a need to diversify their funding base, engage in partnerships and share resources to either meet funder demands or out of their own self-interest.

- **Workload needs:**
  Many organizations surveyed had noted a significant increase in both the level and the type of workload demands placed on them. They are required to provide more services to more clients and, at the same time, keep more detailed client records and provide more detailed reports on their own organizational activities. As a condition for funding, organizations are being required to demonstrate capacities outside their service delivery, including budgeting, evaluation, program administration and fund development skills. Overall, most organizations are finding they need to multitask to meet demands – this means time management, skills training and other related needs.

- **Coping with change:**
  Voluntary sector organizations perceive a significant change in their environments and within their own organizations as a result. For example, the funding environment is increasingly competitive and, as mentioned above, strenuous in its criteria. In addition to the workload and resource challenges presented, nonprofit organizations also noted a discomfort with the types of reporting being requested – for example cost-effectiveness measures requested by funders to demonstrate value for funding. Nonprofits have also, in response to this changing environment, changed their own organizations and expanded their areas of concern. For example, most organizations noted an increased attention to contract, liability and other legal questions in response to the changing environment. Several organizations also reported that they had centralized and professionalized their structures and operating environments, becoming more "business-like" and efficient but at the same time were also concerned about being able to retain their original ideals and independence as "grassroots" organizations separate and distinct from the private and public sectors.

In 2000, Statistics Canada updated its 1997 National Survey of Giving, Volunteering and Participation[15]. The results of the survey focus on the activity of Canadians involved with

[15] Statistics Canada (2000).

voluntary sector organizations but also signal some major needs of the voluntary sector. The Survey found that:

- Nonprofit organizations are facing a larger challenge in recruiting and keeping volunteers. Fewer Canadians are donating their time in 2000 than in 1997 and those who continue to provide their time are providing more of it to keep overall hours of volunteerism roughly unchanged since 1997. As a result, organizations are relying on fewer volunteers and relying on them more heavily.

- Nonprofit organizations face significant challenges in effectively reaching donors in Canada. Donors tend to contribute to several organizations, meaning organizations need to compete for the same dollar pool. For Canadians who do not contribute to nonprofits, the third and fourth most cited reasons are because they do not feel comfortable with the fundraising approach of the nonprofits or because they do not feel confident that their money would be used effectively. For nonprofit organizations, this means a need to think more creatively about fundraising approaches and also a need to demonstrate value and accountability to donors.

PRA Inc.[16] completed a major review of IT use in the Canadian voluntary sector in March 2001. Their study summarized interviews with 24 key informants, 21 of whom represented the voluntary sector as senior staff or executive directors of organizations. Their sample included organizations across Canada and serving diverse populations. All organizations interviewed had paid staff although there was significant variation among operating budgets and size. PRA Inc. also conducted their own review of existing literature; however, many of their sources for the literature review are American and British sources.

Their analysis reveals several gaps, which are discussed in the following section, and several core organizational needs related to IT:

- Voluntary organizations need tools to effectively manage lists for advocacy and fundraising activities.

- These organizations report a need to demonstrate they are still current, by adopting technology. They are concerned that they will be left behind otherwise.

- Nonprofits need reliable, but also flexible, funding. Most government funding more targeted and may restrict organizational activities.

[16] PRA Inc. (2001), "Information Management / Information Technology and the Voluntary Sector – Environmental Scan", prepared for the IM/IT Joint Table, Voluntary Sector Initiative.

In 1999, the Carold Institute produced a report summarizing the major findings presented at the Clare Clark Memorial Symposium. The report, "Voluntary Action and Organization in Canada: The last decade and beyond"[17], states that:

- There are significant barriers to collaboration between members of the voluntary sector, given their diversity, lack of connectivity and increased competitiveness for funding. At the same time it is clear that these same organizations need to collaborate with each other and with members of other sectors to fulfill their missions.

- There is a need to communicate effectively and clearly with the public and with policy makers about the value of the sector and to foster a more positive public image that will be of benefit in fund development, recruitment and advocacy.

- Nonprofits are increasingly taking on several roles at the same time and need to find a balance between core activities such as service delivery with activities such as research and advocacy.

- Nonprofits need to increase their funding base by attracting more diverse funders and even entering into business ventures. This opens a new set of needs for business development supports, such as market research and start-up capital.

Nonprofits face a series of challenges related to human resources. In addition to challenges in recruiting, training, using and maintaining volunteers, organizations need to also attract and retain quality staff and Board Members. The organizations often can only offer low wages and rarely are able to afford the costs of attractive human resources policies.

2.1.1 Summary

Across these sources, patterns of core organizational needs emerge. The following table summarizes these and groups them under five categories:

- Information Management (IM), including the need to manage information internally and the need for certain types of external information;
- Networking and Collaboration;
- Fund Management and Accountability, including the need to manage, monitor and report on funds currently held and provide accurate, well-planned budgets for proposed activities;
- Sustainability, including the need to attract financial resources;
- Human Resources, including needs related to recruitment and training.

[17] Carold Institute (1999), "Voluntary Action and Organization in Canada: The Last Decade and Beyond", report from the Clare Clark Memorial Symposium, http://www.ccp.ca.

Table 1: Summary of the Core Needs of Voluntary Sector Organizations Based on Literature Review

Information Management – *These are needs related to the gathering, sorting, storage, retrieval and use of information to achieve organizational goals or to meet funder expectations.* The needs to: • Keep more detailed client records and provide more detailed reports on their own organizational activities • Cope with more centralized and professionalized structures • Effectively manage lists for advocacy and fundraising activities
Networking & Collaboration -- *These are needs related to ways that voluntary sector organizations work with other organizations to achieve organizational goals or to meet funder expectations.* The needs to: • Diversify their activities and tasks to meet demands • Engage in partnerships and share resources to meet funder demands or become more efficient
Fund Management & Accountability – *These are needs related to good financial management practices or reporting expectations from funders and members.* The needs to: • Demonstrate capacities outside their service delivery, including budgeting, evaluation, program administration and fund development skills • Respond to increased reporting being requested • Attend to contract, liability and other legal questions • Demonstrate value and accountability to donors
Sustainability – *These are needs related to financial resources to support continued organizational activities.* The needs to: • Obtain reliable, but also flexible, funding • Diversify their funding base and even enter into business ventures • Become more creative about fundraising approaches • Demonstrate they are still current by adopting technology

Human resources – *These are needs related to human resources to support continued organizational activities.*

The needs to:

- Recruit, retain and effectively manage volunteers
- Attract quality staff and Board Members
- Provide training to staff and volunteers.

2.2 What are the major gaps in IT use among nonprofit organizations in Canada?

In addition to core organizational needs, there are key gaps in Information Technology use among nonprofits in Canada that need to be considered in any investment strategy. Several existing studies provide a good overview of the barriers and gaps. This review summarizes their main findings.

Canadians are increasingly using the Web and the Internet and there is significant evidence that the digital divide related to Internet access is slowly closing. Fifty-one percent of Canadian households surveyed in 2000 had at least one member who is a regular Internet user[18]. Low-income households, while still at a disadvantage, are also joining the Internet community. In fact, Internet usage among low income households grew by 41% between 1999 and 2000, compared to only 18% for higher income households. What's even more striking is that some of the most traditionally disadvantaged groups are fast becoming some of the largest parts of the Internet community. For example, women in Canada are the majority of on-line users – only in the United States is this also the case. Among developing nations, Internet access is growing faster than telephone access. [19]

Reddick et al.[20] conducted a study of Canadians at the margin in terms of access to the Internet. Their research included a review of previous studies and multivariate analysis of 1997-98 survey data from Ekos Research Associates. The survey data comes from the results of telephone interviews with 3,522 Canadians aged 18 and over The intent of their review was to better understand the attitudes, practices and needs of those Canadians not connected to the Internet and the circumstances under which they would be more likely to go on-line.

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[18] Statistics Canada (2001), "Household Internet Use Survey", *The Daily,* July 26, 2001, http://www.statcan.ca/Daily/English/010726/d010726a.htm.

[19] Nielsen / Net Ratings (2001), Global Internet Index, http://www.nielsen-netratings.com/hot_off_the_net_i.jsp.

[20] Andrew Reddick, Christian Boucher, Manon Groseilliers (2000) "The Dual Digital Divide: The Information Highway in Canada", http://www.piac.ca/telecomm1.htm.

Based on their review, and as of 1998 data, Reddick et al. concluded that cost and literacy are the most important factors in the likelihood of current connectivity or future connectivity. Literacy as a barrier extends beyond reading, writing and technical literacy; it also includes social capacity or the way in which individuals understand and use information in ways that are meaningful and beneficial in their everyday lives. Access to the Internet will not, on its own, overcome social and economic cleavages in communities. However the alternative to not actively taking measures to include non-users is that these members of communities risk being further disadvantaged over the long term. They concluded that the Internet is not replacing other diverse means of access to information (such as fax, in-person, mail, phone) but is increasingly required as one means among a range of connectivity options.

By international standards, Canada appears to be at the forefront of funding voluntary sector IT capacity, both in terms of connectivity and of policy[21]. Drawing on a 1997 study conducted by the federal Volnet program, the authors found that a significant majority (87%) of voluntary sector members have computers, but among these, organizations only have enough computers for one out of every two employees. Less than half (37%) had Internet access and more than half (57%) of those organizations without Internet reported that they could not afford it. Among those with Internet access, 31% used e-mail only, 45% had a website, 16% used File Transfer Protocol (FTP) and 52% used graphical services including e-mail, WWW and Telnet. Although 68% of organizations reported having Internet capacity staff, the overwhelming majority (72%) reported a need for Internet training, including basic training (71%).

In 2001, Volnet conducted another survey of Canadian voluntary organizations[22]. That survey found that a majority of organizations see the Internet as having a sizeable impact on their sector (66%) and see the Internet as a generally positive innovation (62%). The study also found that connectivity is still very much related to organizational income: only 60% of organizations with annual revenues of less than $100,000 have a business telephone line and Internet access, compared to 96% of those with annual revenues of $500,000 or more. Many organizations also continue to make use of relatively older, outdated machines: 51% of computers used by those without Internet access and 31% of those use by organizations with annual revenues of less than $100,000 are computers that are slower than a Pentium 133 MHZ – technology that is already several years old and often cannot accommodate current software. However, among those with an IBM compatible computer, most (76%) are running reasonably current operating systems such as Windows 95/98. A majority of organizations, regardless of annual revenues, are without any formal plan to keep pace with technology in the future.

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[21] Marcus Pargemegiani and Tarun Sachdeva (2000) "Information and Public Policy Concerning Voluntary Sector Use of Information Technologies, the Internet and the World Wide Web: An International Report", Canadian Centre for Philanthropy, http://www.ccp.ca.

[22] Ekos Research Associates Inc. (2001) "Survey of Voluntary Organizations, Final Report", Voluntary Sector Initiative, http://www.vsi-isbc.ca/eng/reports.cfm.

Drilling deeper into access issues, the same study also found that high-speed access, increasingly necessary to complete certain types of information exchange over the Internet, is only held by 43% of organizations with annual revenues of $500,000 or more and 15% of those with annual revenues of $100,000 or more. A significant number of these organizations are also concerned about their ability to maintain their connectivity over the next 2 years. Cost appears to play a significant role, given the relation between revenues and connectivity and is confirmed by the organizations themselves. Specifically, those without Internet access cite the set-up costs (58%) and software and hardware upgrading costs (56%) as barriers to connection.

Once organizations do gain Internet access, few are using it to raise money. Only 3% of organizations with annual revenues of less than $100,000 and 8% of those with annual revenues of $500,000 or more, use the Internet to accept online donations. Most organizations (76% of those with Internet access) see it as an important means to share information and conduct research activities (71% of those with Internet access). Looking ahead, most organizations see e-commerce rising in importance to their own Internet usage in the next 5 years

In looking at access and usage issues, it's important to distinguish between what is really a technology issue and what is really an organization or management issue. For example, databases may solve several knowledge management needs for organizations, but they bring with them several technology issues[23]. For example, installation is fairly complex requiring appropriate security and permission measures. Hardware may need to be upgraded or a Local Area Network installed to ensure that the database works smoothly and can be accessed by several users. Furthermore, a database may need customization to tailor it to the particular organizational needs, and this is without entering into questions of training, maintenance and quality control. In this instance, a technology solution also has several technology related barriers to access. But the same application can also raise significant barriers that are not the result of the technology, but rather are organizational in nature. Organizations looking for the perfect database might often instead benefit from better data collection practices or a human resources investment in one dedicated person to input and manage the data[24].

The Voluntary Sector Initiative (VSI) has held 10 broad-based consultations in each province across Canada, involving 40-120 representatives from the sector as well as elected officials and public servants from all levels of government in each of the consultations. The Secretariat reported that these consultations revealed at the following comments regarding IT gaps in the voluntary sector:

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[23] Focus I.T. Solutions (2000) "Databases – The 'Iceberg' Effect", Briefing Paper, I.T. and the Voluntary Sector, Voluntary Sector Initiative.

[24] Marion Agnew (2000) "At Nonprofits, Management Of Technology Matters Most.", *InformationWeek*, October 16, 2000, p.178.

- There is a lack of information within the sector that leads to a lack of sharing in successes or direction to resources available to the sector.

- Small centres don't have easy access to technology.

- There are opportunities being lost to the voluntary sector because of a lack of technology.

The PRA Inc. study, cited above, also revealed significant gaps in IT in the Canadian voluntary sector. Their results, from interviews and a literature review, highlight several, often interrelated, IT gaps across voluntary sector organizations. The gaps identified range from the most basic access issues, to complex organizational issues.

PRA Inc. found that:

- Over half of the organizations surveyed reported a need for even basic IT equipment such as a computer or even older IT tools such as fax or voice mail. Several nonprofits, particularly in rural and remote communities, lack reliable access to the Internet although they may be more dependent on it to overcome distance barriers in their day-to-day work.

- Nonprofit organizations have difficulty devoting the time required to technology related projects. They often underestimate the real time involved and frequently do not have a dedicated staff person responsible for IT.

- Nonprofits have a difficult time allocating resources to meet IT needs. This can be the result of poor planning and underestimating real costs, funding restrictions or direction from a Board or management that undervalues the benefits of technology to the organization and its ability to fulfill its mission. In general, all nonprofits are faced with limited resources and increased demands and IT needs are no exception to the trend.

- Nonprofits are struggling to make good IT choices and feel overwhelmed by the amount of information, the complexity of technologies, the pace of change in technology and the difficulties in getting reliable external advice. At the same time, nonprofits rarely have opportunities to learn from each other about successful or less successful IT investments or to engage in ongoing training to keep up with changes.

- The sector is not a monolith and there are differences in where the gaps lie. For example, organizations that are more reliant on government funding are the most disadvantaged in restrictions on IT purchases.

Reed and Howe[25] also found certain gaps in IT use among nonprofits in their review of Ontario organizations. They found that:

[25] Reed and Howe (2000).

- There are increased demands to computerize, digitize and implement new software to track activities, such as case management support. But often the software changes too rapidly to keep up with time consuming training.

- Software that is customized to meet the needs of one organization is often less useful to other organizations, making it difficult to share resources and spread the technology across the sector.

They also confirmed that, for rural organizations, the Internet is a more of a priority as a means to overcome distance barriers, at the same time, they find getting access to the utilities and resources needed more challenging that their metropolitan counterparts.

2.2.1 Summary

From the available data, several patterns emerge. The following table summarizes these and groups them under the following headings: Funding; Technical support, training and human resources; Infrastructure; Perceived benefits and organizational culture

Table 2: Summary of Major Gaps to Technology Use Among Voluntary Sector Organizations, from Literature Review

Funding – *These are gaps related to the financial resources available to purchase or sustain technology.* • Organizations have no funding or insecure funding to buy and maintain Information 'Technology (IT). • Organizations have trouble allocating money to IT or tend to underestimate the real costs of ownership. • Organizations are restricted by funders in their ability to invest in IT.
Technical support, training and human resources – *These are gaps related to knowledge about technology.* • There's little training available and organizations lack the skilled personnel they need. • Organizations find it hard to devote the time needed to IT projects and tend to underestimate the real time and effort involved. • Organizations find it hard to keep up to date on IT changes and to get useful information, including best practices, about IT.

Infrastructure – *These are gaps in access to basic technology equipment, software or services.*

- Some organizations need a computer or an upgraded computer and/or software.
- Some organizations need older technologies (fax, voicemail, teleconference, etc.).
- Many organizations lack reliable access to the Internet and most do not have high speed Internet access.

Perceived benefits and organizational culture – *These are gaps that are related to the way that voluntary organizations think about technology and the role it plays in their activities.*

- Some organizations may not see the benefits of investments in IT, particularly given the costs associated.
- Some organizations' management or boards may not see the benefits of investment in IT at the perceived expense of service delivery.
- Funders do not always see the benefits of investment in IT, at the perceived expense of service delivery.
- Organizations cannot afford to not invest in technology or they will risk being left behind.
- Organizations differ in their capacity to invest in and effectively use IT; this may depend on size in terms of revenue or in terms of employees.

2.3 Results from the Best Practice section of the literature review

Based on responses to the pilot survey, we carried out a best practice review, split into four categories: highest priority options (5) that had broad support from most respondents; medium priority options (4) that had broad but somewhat softer support from respondents; low priority options (3) that had elicited a neutral response from respondents; and high risk options (5) that have little or no support among respondents. For each grouping, the choices will be briefly described and, for the first and second priority options, examples of these options in current practice will be briefly described.

The scores and rankings of these options are described in detail in the spreadsheets that are available as supplementary documents from the Voluntary Sector Initiative. These choices are listed in order of rank, with the highest rank first.

2.3.1 High Priority Options

1. "An inexpensive and easy method to use online database of funders with detailed information about who they fund and how to apply. The service should make it easier to apply for funding by allowing organizations of all sizes to search for funding for which they are eligible".

Sustainability, and more precisely funding, is a key organizational need and gap in IT use that has been identified repeatedly by non-profit organizations. On-line databases allow non-profit to conduct highly targeted or very broad searches for multiple funders at the same time, saving significant staff time and resources in identifying potential funders. Good databases also provide sufficient information about funders to allow organizations to determine which organizations they are most likely to have success in approaching. This saves both funders and organizations significant time and resources. There exist already a number of such databases that allow non-profit organizations to search for funders according to the type of funder and the type of initiatives funded. For example:

- The Canadian Centre for Philanthropy (www.ccp.ca) provides an on-line subscription database of grant-makers in Canada. The directory is also available for purchase in print format and the Centre will also conduct (for a fee) targeted search for foundations who lack the time or technology to conduct their own search of the print or on-line materials. Subscribers can search the database for specific funders by name, or by each of the following fields: the type of activity they are seeking funding for; geographic location; amount requested; and type of funding being sought -- or by all fields at once.

- Vancouver-based, Metasoft's Big Online (www.bigdatabase.com/bigonline.nsf/publish/welcome) is an on-line subscription-based database of grant-makers in Canada and the United States. The directory includes more than 67,000 available funding sources from private foundations, corporate sources and government programs. The database is updated regularly and includes information on funders' organization profile and contact information, financial statements, funding preferences and recent grants made. Metasoft updates the entries regularly through a team of 4 researchers and also offers consultation services on proposal writing.

- As a multi-purpose site for philanthropy – both non-profits and funders -- the Foundation Center (www.foundationcenter.org) provides a very detailed, searcheable web-based database of U.S.-based grant-making foundations. Users can search for foundations or for grants awarded. A highly sophisticated search engine allows searching by multiple fields including funding type, geography and subject area. The database also includes a thesaurus to help users develop more effective searches. The service is subscription-based and provides

4 levels of access depending on need. The Center also provides training assistance to users in seminars across the U.S.

- Among its other on-line features, Community of Science (www.cos.com) includes a subscription-based on-line database of grant-makers in the R&D field around the world. The database includes a highly sophisticated search tool that allows grantees to do simple searches by geography or keyword, but also highly refined searches by multiple fields including funder type, funding amount, submission deadline and funding requirements. such as Also includes an e-mail update feature to alert users to new additions. The site also provides users the opportunity to publicize their major research findings and to tailor the site into a personal "Workbench".

All of these databases are subscription based and subscription costs can be prohibitive for some organizations with more limited resources. Existing databases also vary in the sophistication and user-friendliness of their search tools and the most sophisticated database is targeted to the scientific community not the voluntary sector.

2. "Direct funding or discounted prices for computers, software, Internet connections and system upgrades."

Non-profit organizations have signalled that funding and costs of technology are significant gaps in using IT. This option would increase access to technology by reducing the costs of technology or covering the costs that may not otherwise be available through project or program funding. There are some examples of direct funding and reduced costs:

- Announced in the 1998 federal budget, the Voluntary Sector Network Support Program (VolNet; online at: www.volnet.org) offers Internet connectivity, including computer equipment, new information technologies, network support and Internet skills development, to voluntary organizations. For eligible voluntary sector organizations, VolNet offers: a basic Internet account for one year; funding of up to 50 percent of the cost of the equipment needed to connect to the Internet; and basic Internet skills development to get on-line and start using the Internet. The program is currently scheduled to end March 31, 2002.

- Computers for Schools (CFS; online at: www.schoolnet.ca/cfs-ope/) is a national, federal government-led program that operates in cooperation with all provinces and territories, the private and volunteer sectors. The program collects, repairs and refurbishes donated surplus computers from government and private sector sources and distributes them free to schools and libraries throughout Canada. Since 1993, CFS has provided more than 250,000 computers to schools and libraries in all provinces and territories. CFS now delivers more than 60,000 additional computers each year. The program also oversees repair and refurbishing centres throughout Canada where surplus computers are cleaned, refurbished and prepared for delivery. Workshops are staffed by volunteers, including current and retired telecommunications professionals, and students.

- Several IT providers offer a gifts in kind program to reduce costs of their products to non-profit organizations or offer limited numbers of products free of charge. For example, software giant Microsoft (www.microsoft.com/giving/np_tsolu.htm) offers the latest versions of its software products to non-profits who successfully apply through 2 third-party websites (www.compumentor.org and www.giftsinkind.org) that charge an administrative fee (however far lower than the retail cost of the products). To qualify, organizations must be registered charities.

Each of these example can provide direct funding or reduced costs to cover some the expenses of IT for non-profit organizations. Unfortunately they are each limited either by time or by the members of the voluntary sector organizations who can benefit.

3. "More flexibility from funders to allow organizations to buy computers and software or upgrade their systems as an ongoing operating expense."

Non-profits have signalled that a significant gap in IT use is a lack of flexibility to use grants to purchase technology. They report that, in general, funders are more restrictive in their program and project grants and less receptive to requests to include IT investments in general funding schemes.

Within the federal government, this is a matter of contracting policy and practice established by the Treasury Board Secretariat by individual funding departments. Outside the federal government this is a matter of the individual policy and practice of particular funders.

The VSI Working Group on Financing is currently working to examine issues that affect the stability and sustainability of voluntary sector organizations. Some issues are being examined with the Capacity Joint Table, while others - such as the current federal funding situation - is being examined by the Interdepartmental Working Group. The Working Group's recent Progress Report confirmed that "funding that doesn't always consider the real costs of implementing a project or delivering services; such as directly-related infrastructure costs."[26] This IT investment option may an area for coordination and collaboration between the IM/IT Joint Table, the Working Group on Financing and the Interdepartmental Working Group.

4. "Reduced administration and paperwork for filling out funding proposals and reports. A possible service could eliminate duplication of paperwork by providing a common online database of information that funders frequently request."

[26] Voluntary Sector Initiative (2001) "Impediments identified in current federal funding practices", Progress Report of the Working Group on Funding, Treasury Board Secretariat, Government of Canada.

Non-profits have noted their information management needs and requirements to meet funder reporting and administration expectations could be improved by reducing the paperwork and administrative burden. A secure database would allow non-profits and funders to save time and resources in meeting reporting and administrative requirements. By providing access to commonly requested information in a secure, on-line format, non-profits can spend less time producing multiple reports to multiple funders and funders can receive ready access to information in a consistent and useful format. Already some websites and IT providers are creating tools to facilitate this type of e-reporting, for example:

- Microwedge (www.microedge.com/products/mygifts/) has created an integrated system of grant management software for grant-making organizations. Microwedge's GIFTS software creates a database funders can use to track a funded project from the initial request, through approvals, payment scheduling and reporting. The software includes several correspondence, reporting and budgeting templates to allow funders to draw out information from the database in a ready to use format. The software also works with an add-on Integrated Grant Application Module that lets grant applicant apply for funding on a secure Internet site. For U.S. users, the software automatically verifies charitable status and duplicate records of applications and can generate automatic personalized replies to applicants.

- Foundation Center (www.foundationcenter.org) provides access to a set of common on-line grant applications and on-line reports now used by several associations of funders in the U.S. such as the Donors' Forum of Chicago and the National Network of Grantmakers. These applications allow non-profit organizations to seek funding from multiple funders through one type of application form. Some applications can be downloaded in Word and completed electronically while others must be printed from Adobe Acrobat. These common forms can save non-profits significant time and effort by allowing them to duplicate much of or even all of the same information on an application form submitted to another funder.

- Community of Science (www.cos.com) provides science research funders with subscription-based access to on-line tools. Through its COS Expertise, funders can search a database to verify profile information about research organizations applying for funding, including biographies of individuals applying for funding, and to identify peer reviewers for funding allocation panels. Research-driven companies, government agencies, and private foundations can use COS Expertise to identify prospective collaborators, license new technologies, leverage R&D efforts and perform due diligence. All of this can significantly reduce the administrative burden on applicants, funded researchers and funders while enhancing opportunities to leverage project funding and collaborations.

5. "A national website that would provide 'one-stop shopping' of information for and about the voluntary sector. The website would include news updates, best practices, links to important web resources, advocacy tools including email campaigns and research about the sector."

Nonprofits have noted that they often do not know where to look on the Internet for information and that the number of different sites available makes it difficult to know which to use. A one-stop-shopping Internet site would provide non-profits primarily, although funders and others interested in the voluntary sector in Canada, with a single point of entry (a portal) on the Internet to access multiple sources and types of information and services. The site can be constructed to be sector-wide or multiple sites might be tailored to the needs of sub-sectors (such as social service providers or arts organizations). There exist already several examples of on-line portals for the voluntary sector:

- GuideStar (www.guidestar.org) is a searcheable on-line database of registered non-profit organizations in the U.S. Produced by Philanthropic Research Inc., Guidestar provides a single point of access for funders to information about the operations and finances of nonprofit organizations and allows donors to seek out and compare charities, monitor their performance and ensure greater confidence in their grantmaking activities.

- Network for Good (www.networkforgood.com) is a newly-launched online portal aimed at assisting charities in strengthening their connections with people seeking to donate, volunteer or speak out on issues. Users will be able to investigate and donate to nearly 850,000 charities in the Guidestar database, and peruse tens of thousands of volunteer opportunities

- The Scottish Council of Volunteer Organizations (www.scvo.org.uk) is developing WorkWithUs.org (www.workwithus.org) a new, single on-line gateway for the Scottish voluntary sector. Once it is launched, the portal aims to deliver "a single port of call on the Internet for accessing all information, services and opportunities in the voluntary sector; a huge and totally interactive warehouse of websites; the biggest electronic library exclusively containing Voluntary Sector information, and a shopping mall housed within" the site. To meet the IT needs of Scotland's non-profit organizations, WorkWithUs.org will also act as a consolidator of the latest software technology and will provide an interactive communication office on the internet designed for, and used by, thousands of charities and Voluntary action groups.

- Settlement.org (www.settlement.org) is a one-stop source for information and tools relevant to nonprofit settlement service providers in Ontario. Service providers can access information on topics from employment and education to social services to legal and human rights that they need daily to provide services to their clients. Service providers can also download and print forms instantly that might normally take weeks to arrive by mail. There is also a reference section for staff that provides access to recent reports, community publications and other relevant web tools.

- The Government of the Republic of Ireland, through Comhairle, the national social service agency, provides on-line access to a Resource Database for Voluntary and Community Sectors in Ireland (www.comhairle.ie). On-screen access to the system is designed through a number of alternative routes; full text wordsearch, index, keyword and alphabetical contents

listings. The database contains at least 6 different categories of information including: funding for voluntary bodies for the Republic of Ireland and for Northern Ireland; practical information on managing volunteers; a directory of more than 500 non-profit organizations in the sector including a description of their activities and contact information; a guide to setting up an information service in a non-profit organization; information on establishing any non-profit body; and, a guide to other supports and resources available to the sector.

2.3.2 Medium priority options

These are options that received broad but somewhat softer support from respondents than first order choices.

6. "Online and distance training for staff and volunteers. This could include technical training in using computers, general professional development or management education for staff and volunteer development."

Non-profits have argued that a significant barrier to technology use is the availability and cost of training for staff. They've also noted that, more generally, they have unmet training needs for staff and volunteers in their organizations. On-line and distance training can be a relatively inexpensive and convenient way to access training services on IT or other organizational needs. There are already several on-line training providers. Although most target for-profit companies, they might also meet the needs of non-profit organizations as well for professional development, IT skills training or management education. To access this training, most users will need access to hardware and Internet access.

- Digital Think (www.digitalthink.com) a major provider of technology training. All of its training services are delivered entirely over the Internet. Training courses can also reach multiple users within an organization at the same time by setting up a on-line course through an internal intranet. Digital Think claims its clients include private sector, public sector and voluntary sector organizations.

- Smart Planet (www.zdnet.com/smartplanet/) delivers on-line training and certification in several technology areas (including web development, web design and Java programming). Two training options are available: self-study courses that allow users to study at their own pace, and interactive instructor-led courses.

- Brainbench (www.brainbench.com/xml/bb/homepage.xml) is a provider of on-line information technology, financial, essential, computer and other skills testing. Tests can be used to certify skills developed, verify applicant skills or assist with allocation of tasks that require specific skill sets. This can help organizations make smarter decisions about staffing or volunteer management to meet their organizational needs.

- The International Computer Driving License (www.icdlcanada.com/) establishes standards for computer literacy. It is a qualification that verifies a person's competence, declares their computer skills and makes them readily mobile within a sector. ICDL allows self-taught users to have their skills certified and is open to anyone regardless of age, education, experience or background.

- SmarterOrg.com (www.smarterorg.com) is an on-line developer and provider of on-line training programs for non-profit organizations. It offers more than 200 courses on non-profit management (including financial management), technology training and business skills. Training can also be tailored to the individual needs of organizations.

7. "A way to find information about other voluntary sector organizations on the web including an updated online database of voluntary sector agencies and possibly contact information for experts in various fields. Some of this information may be public and some private for agencies only."

Non-profit organizations have identified collaboration as a significant organizational need and concern that it is difficult to find information about other organizations in the sector. This information can be used to identify organizations with whom to collaborate or, can also provide a source of referrals for service delivery agencies. This option may also overlap with the option to create an on-line portal for the voluntary sector (discussed above). There are examples of such directories available on-line:

- A mentioned in a previous section, the Government of the Republic of Ireland, through Comhairle, the national social service agency, provides on-line access to a Resource Database for Voluntary and Community Sectors in Ireland (www.comhairle.ie). The database includes a directory of more than 500 non-profit organizations in the sector including a description of their activities and contact information.

- CharityVillage (www.charityvillage.ca) provides a free directory of registered charities and non-profit organizations in Canada. Any registered charity or non-profit can submit a brief description of their organizational activities and a link to their website. The directory can be searched by keyword or by sub-sector categories (such as "Addiction and Mental Health" or "Education").

- The Community Economic Development Technical Assistance Program (CEDTAP, online at: www.carleton.ca/cstier/cedtap), is a five-year initiative to support collaboration and access to a network of community development professionals for organizations engaged in community economic development throughout Canada. Organizations can search the on-line directory of registered technical assistance providers and apply to receive financial assistance to cover the costs of the technical assistance services.

8. "Fundraising tools, including fund processing, e-commerce, direct e-mail campaigns and donor management software."

As noted earlier, fund development is a significant organizational need for non-profits in Canada and can divert significant time and resources away from other activities. Non-profits are beginning to turn to the Internet as a tool for fund development, through on-line donation pages or hosted sites, on-line auctions and on-line advertising and outreach. There is no conclusive evidence about the effectiveness of on-line strategies, although it is worth noting that on-line contributions made in the days following the recent terrorist attacks in the U.S. have dwarfed all previous Internet fund-raising campaigns. More than (USD) $70-million of the (USD) $676-million in contributions as the beginning of October for relief efforts following the terrorist attacks have come in on-line and 30% of the American Red Cross' fund raising for the relief effort have come from on-line sources.[27]

- Charity.ca (www.Charity.ca) is a website aimed at increasing donations to Canadian charities and inspiring socially responsible business practices. It allows charitable organizations to register to receive donations and interested donors to make donations through a secure on-line site. While they do not publish statistics of the number of donations received or their dollar value, the site does state that it has experienced growing demand as more users become accustomed to and comfortable with the technology.

- Canadahelps.org (www.canadahelps.org) is a similar website to facilitate on-line donations. It only accepts donations to registered charities and provides and incentive to donors by generating a tax receipt for the donation within minutes of completing the transaction.

- e-Tapestry.com (www.etapestry.com) is a U.S.-based provider of a comprehensive application for tracking donor, prospect, or alumni records as well as managing gifts, pledges, and payments over the Internet. It works as an on-line application service provider to registered users who can access the full range of services from any Internet connection. The service is available for free to non-profits so long as they have 500 or fewer donor records to maintain and is then available at a cost of $30/month for the management of up to 1,000 donor records. A parallel site and service has also been created for non-profits in the United Kingdom.

- salesforce.com (www.salesforce.com) is a leading provider of on-line customer relation management (CRM) tools that help for profit companies attract and retain customers. It can support marketing, sales and customer support functions within a for-profit setting and could

[27] Nicole Wallace (2001), "Online Giving Soars as Donors Turn to the Internet Following Attacks", *The Chronicle of Philanthropy*, Special Report, October 4, 2001, available on-line at http://www.philanthropy.com/free/articles/v13/i24/24002201.htm

also meet several marketing, funder or member support and fund-development needs in a non-profit setting. Registered users can enter and access contacts, accounts, forecasts and can share these with colleagues. Additionally, salesforce.com allows users to analyze and segment customers and prospects, track marketing effectiveness and generate valuable reports from data stored on-line.

9. "A stable, reliable and inexpensive service to allow voluntary sector organizations to create websites with their own domain names. The websites should be easy to update and allow staff or volunteers to publish community information on the web including information about their services, educational material, advocacy and other public communication material. It would also let organizations publish private documents for staff and volunteers such as policies and internal documents."

While a growing number of non-profits in Canada are developing and maintaining their own websites, many others still have no on-line presence. Many organizations also report they struggle to maintain up-to-date information on their website since the site may be difficult to add to or to update information. There are already several on-line web-page development tools that allow users, even private individuals, to create a personalized webpage or website. Tools that are based on templates are often easier to use since they require little if any programming and can be easily updated with little effort. Any website development tool must create sites that are stable and robust enough to be useful to non-profit organizations. The following are examples of existing free or low-cost on-line website development tools:

- Yahoo GeoCities (http://geocities.yahoo.com) provides users with free access to fill-in-the-blank templates to quickly create basic websites of up to 15 megabytes. The PageBuilder tool allows users to manipulate the look of their site without any programming. Visitor statistics tracking and other services are also available for a monthly fee. Additional webspace (in 5 megabyte blocks) can be purchased. For more sophisticated users, there is also a Webmaster version that provides a domain name, password protection and 10 e-mail addresses. Unless upgraded services have been purchased, Geocities does include pop-up advertising on all sites.

- Tripod-Lycos (http://www.tripod.lycos.com) is another free on-line site-building tool. For less experienced users, QuickPage provides form-based templates for each section of a website. The templates also allow features such as message boards and chat rooms. Users who want to create larger sites can also download the Tripod version of Trelix, a user-friendly website development program that requires no knowledge of HTML programming. Again, if these free on-line tools are used, the final site will include pop-up advertising.

- Homestead.com (www.homestead.com) is yet another on-line site-building tool. For personal users, Homestead provides 16 megabytes of webspace and a very powerful and user-friendly website development tool, SiteBuilder. SiteBuilder allows users to place features exactly where they would like them on a site and to add text, images, chat rooms,

polls, sound, message boards, guest books, effects like dissolving text, and even streaming video. Set-up for on-line vendors is also possible. There are also 400 templates to choose from for users who prefer them. No advertising is placed on the page, only a navigation bar that can be easily removed or replaced. Personal accounts can be established starting at (USD)$5 per month and corporate accounts starting at (USD)$30 per month (corporate accounts provide access to more sophisticated tools and larger storage space).

2.3.3 Low priority options

These are options that elicited a neutral response from respondents.

10. "A way to collect and manage client and service information in a form that is secure but can be summarized for funders. This would reduce the administrative expense of satisfying accountability requirements."

Non-profits have reported that they are under increased pressure to meet performance reporting obligations to funders. Software, such as Management Information Software, that is flexible enough to produce reports in a variety of formats for funders, might enable non-profits to more easily and inexpensively meet reporting requirements. At the same time, a good MIS should provide information to non-profits that they themselves find useful for informing activity planning, staffing and other management decisions.

11. "Easier ways to participate in consultations, so that all agencies have access to public policy and engagement processes. This may include lists of fax numbers and email addresses for agencies who are willing to be consulted on specific issues."

Non-profit organizations have reported that engagement in public policy processes and consultations are significant needs in meeting their organizational mandates. An up-to-date database of contact information would more easily allow policy-makers to contact non-profit organizations on issues that are of interest to them. Support for a commitment to implement the practice would need to be government-wide.

12. "Inexpensive teleconferencing, videoconferencing and web based meeting tools to encourage collaboration and reduce travel costs. It could include shared workspace on the web, shared event calendars and discussion groups and could support telecommuting for staff and volunteers. This would also encourage accessibility to remote agencies and community members."

Non-profits have stated that they are working more often in collaboration with other organizations to achieve organizational objectives and meet funder expectations for partnerships. Several IM/IT tools might help non-profits be more successful in those partnerships by

increasing communication and productivity and reducing costs – for example of face-to-face meetings.

2.3.4 High risk options

These are options that received little or no support among respondents

13. "E-mail for all voluntary sector organizations. There should be a way to set up secure, reliable e-mail addresses for every organization and provide a way for them to pick up e-mail either using a computer or other simpler devices."

E-mail is one of the most commonly-used technologies among non-profits, although many non-profits report they do not have access to e-mail or access to reliable, secure e-mail services. Free or low-cost e-mail help all non-profits communicate at much lower costs than, for example, long-distance telephone calls, share documents electronically or join list-serves or newsgroups on topics of interest to them.

14. "A toll-free technical support line and other off-site centralized help. This could include contracts with central organizations to help agencies in their region or assist with the development of a national "I.T. Youth Corps" that would provide technical support."

Many non-profit organizations, particularly smaller organizations, have reported that a significant obstacle in making use of technology is the unavailability or unaffordability of technical support for users.

15. "Consumer reviews of hardware, software and best practices to enable sharing between voluntary sector organizations and better decisions about how to use and buy technology."

Many non-profit organizations have reported that they do not have enough information about available technology option to be able to chose and invest wisely in the best solutions to meet their needs. They also report feeling overwhelmed by the range and pace of change in technology available to them. By publicizing consumer reviews and best practices, non-profit organizations can learn based on each other's experiences. Current reviews may not always present information in a way that is useful to non-profit organizations or takes into account their particular organizational needs.

16. "Volunteer, staff and Board recruitment including matching through online databases."

Non-profit organizations have reported that volunteer, staff and Board recruitment is an important organizational need. Many non-profits may struggle to find the right staff, Board members or volunteers with the right skills to fill a human resources need. An on-line database

might better skilled link jobseekers, volunteers and prospective Board members with non-profit organizations by matching profiles of positions available with individual profiles.

17. “Simpler technology devices to replace computers for basic tasks and reduce the need for training and technical support. Technology must be easier to use so it doesn't take so much time from organizations.”

Earlier studies have found that many non-profit organizations may not be using technology in the most efficient or effective way possible. At the same time, non-profit organizations report that they often find technology complex and difficult to use. One option is to provide funding to replace more complex technology applications and devices with simpler ones that are more focussed on needs. For example, an Executive Director may spend very little or no time on word processing or developing spreadsheets – activities that make most sense on a desktop computer with a larger memory, keyboard and screen. That Executive Director may benefit more from a hand-held personal organizer with contact management, e-mail and scheduling functions and at a lower cost than the desk-top.